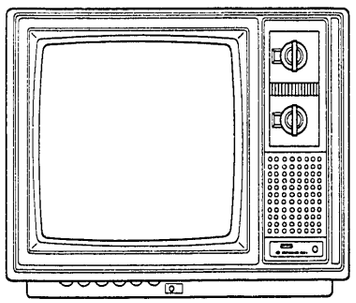
HITACHI
SERVICE MANUAL

YK | **No.776E**

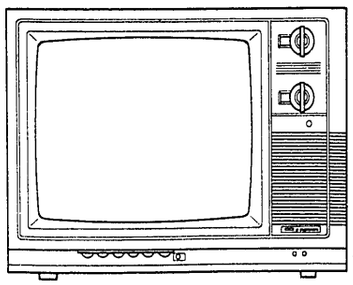
CT1900
CT1910
CT1912

CAUTION:
Before servicing this chassis, it is important that the service technician read the "Safety Precaution" and "Product Safety Notices" in this Service Manual.



(CT1900)

This service manual shows only essential items.
Our complete service manual including "alignment procedure", "printed wiring boards" and "technical information" are issued by manaul NO. 750.



(CT1910/1912)

CONTENTS

SAFETY PRECAUTIONS 2
PRODUCT SAFETY NOTICE 3
TECHNICAL SPECIFICATIONS 3
CONTROLS 4
TECHNICAL CAUTIONS 5
BASIC CIRCUIT DIAGRAM 6
PRINTED WIRING BOARD 8
WIRING DIAGRAM 10
REPLACEMENT PARTS LIST 12

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

COLOR TELEVISION

October 1981 **YOKOHAMA WORKS**

SAFETY PRECAUTIONS

NOTICE: Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis or picture tube.

WARNING: Since the chassis of this receiver is connected to one side of AC power supply during operation, whenever the receiver is plugged in, service should not be attempted by anyone unfamiliar with the precautions necessary when working on this type of receiver.

The following precautions should be observed:

1. Do not install, remove, or handle the picture tube in any manner unless shatterproof goggles are worn. People not so equipped should be kept away while picture tubes are handled. Keep picture tube away from the body while handling.
2. When service is required, an isolation transformer should be inserted between power line and the receiver before any service is performed on a "HOT" chassis receiver.
3. When replacing a chassis in the receiver, all the protective devices must be put back in place, such as barriers, non-metallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
4. When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
5. Always use the manufacturer's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's. Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
6. Before returning a serviced receiver to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the receiver by the manufacturer has become defective, or inadvertently defeated during servicing.

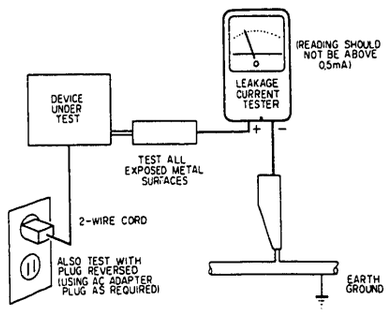
Therefore, the following checks should be performed for the continued protection of the customer and service technician.

Leakage Current Cold Check

With the AC plug removed from the 120V AC 60Hz source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (antennas, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of 0.3MΩ and a maximum resistor reading of 5MΩ. Any resistor value below or above this range indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into a 120V AC 60Hz outlet (do not use an isolation transformer for this check). Turn the AC power switch on. Using a "leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (antennas, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5mA.


(READING SHOULD NOT BE ABOVE 0.5mA)
LEAKAGE CURRENT TESTER
DEVICE UNDER TEST
TEST ALL EXPOSED METAL SURFACES
2-WIRE CORD
ALSO TEST WITH PLUG REVERSED (USING AC ADAPTER PLUG AS REQUIRED)
EARTH GROUND

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE RECEIVER TO THE CUSTOMER.

High Voltage

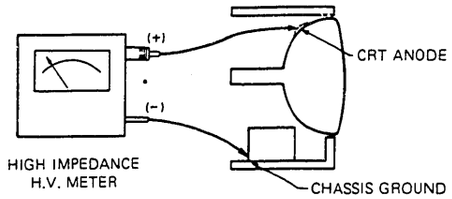
This receiver is provided with a hold down circuit for clearly indicating that voltage has increased in excess of a predetermined value. Comply with all notes described in this Service Manual regarding this hold down circuit when servicing, so that this hold down circuit may correctly be operated.

Serviceman warning

With minimum Brightness and Picture, operating high voltage in this receiver is lower than 31.0KV. In case any component having influence on high voltage is replaced, confirm that high voltage with minimum Brightness and Picture is lower than 31.0KV. (If the high voltage is higher than 31.0KV, reconnect size adjustment 1P plug in MAIN P.W.B. from S terminal to L terminal (H.OUT PWB) and reconfirm that the high voltage is lower than 31.0KV.)

To measure H.V. use a high impedance H.V. meter. Connect (–) to chassis earth and (+) to the CRT anode button. (See the following connection diagram).

NOTE: Turn power switch off without fail before the connection with Anode button is made.



X-radiation

TUBE: The primary source of X radiation in this receiver is the picture tube. The tube utilized for the above mentioned function in this chassis is specially constructed to limit X radiation emissions.

For continued X radiation protection, the replacement tube must be the same type as the original, HITACHI approved type.

When trouble shooting and making test measurements in a receiver with a problem of excessive high voltage, avoid being unnecessarily close to the picture tube and the high voltage component.

Do not operate the chassis longer than is necessary to locate the cause excessive voltage.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in HITACHI television receiver have special safetyrelated characteristics. These are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the HITACHI recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, X-radiation, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current HITACHI Service Manual. A subscription to, or additional copies of, HITACHI Service Manual may be obtained at a nominal charge from HITACHI SALES CORPORATION.

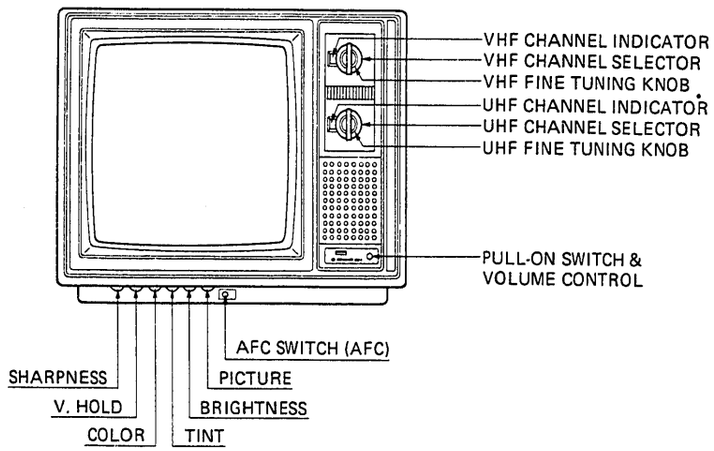
TECHNICAL SPECIFICATIONS

ANTENNA INPUT IMPEDANCE	300Ω, 75Ω
CHANNEL COVERAGE	
VHF	54MHz ~ 88MHz
	174MHz ~ 216MHz
UHF	470MHz ~ 890MHz
INTERMEDIATE FREQUENCY	
Picture I-F Carrier	45.75MHz
Sound I-F Carrier	41.25MHz
Sound I-F	4.5MHz
POWER INPUT	120V, 60Hz
POWER RATING	99W
CONVERGENCE	Self convergence
FOCUS	Electrostatic
SOUND OUTPUT	2W, 400Hz
SPEAKER	10 x 15 cm, 8Ω

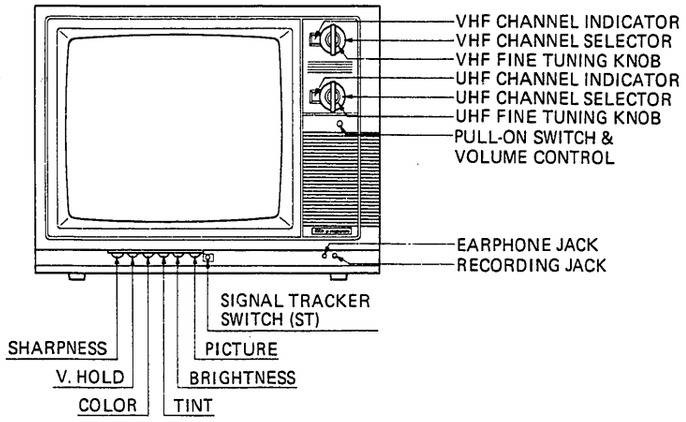
DIMENSIONS	CT1900	CT1910/1912
(W)	64.0cm	64.2cm
(H)	45.9cm	46.3cm
(D)	49.4cm	47.7cm
WEIGHT		Appr. 22kg

CONTROLS

(CT1900)



(CT1910/1912)



TECHNICAL CAUTIONS

[CHECK OF HIGH VOLTAGE HOLD DOWN CIRCUIT]

Checking of the high voltage hold down circuit operation

1. Turn the switch of the set OFF.
2. Connect a high voltage voltmeter between the CRT anode and the chassis ground (K3) as shown in Fig. 1.
3. Short-circuit between the case of IC901 and +B using a shorting lead wire as shown in Fig. 2.
4. Set Brightness/Picture controls to max.
5. Turn the switch of the set ON after setting the AC input voltage to 0V, and then gradually increase the AC input voltage and check that the picture disappears when the high voltage is less than 31.0 KV.
6. Turn the switch of the set OFF immediately after checking that the picture disappears.
7. Remove the adjusting jig and the voltmeter.

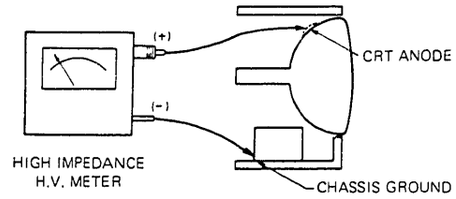


Fig. 1 Connection of H.V. Meter

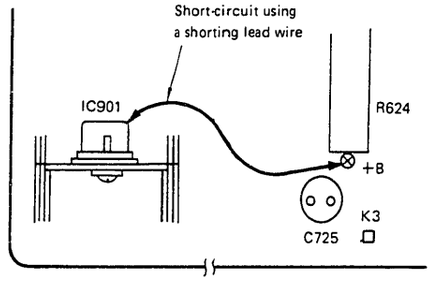
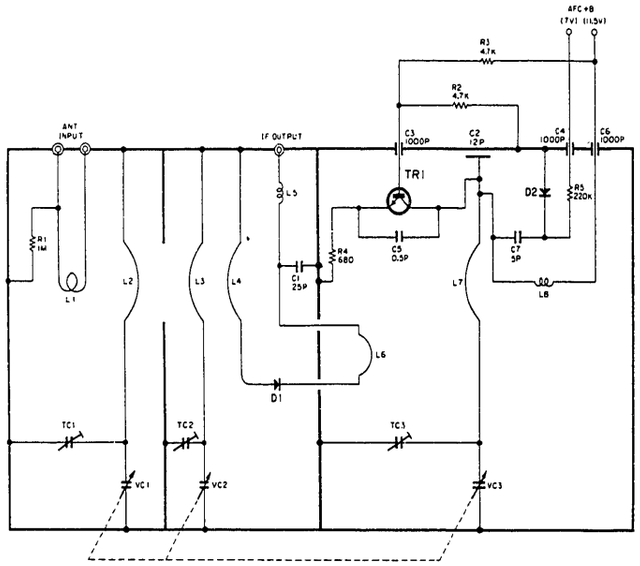


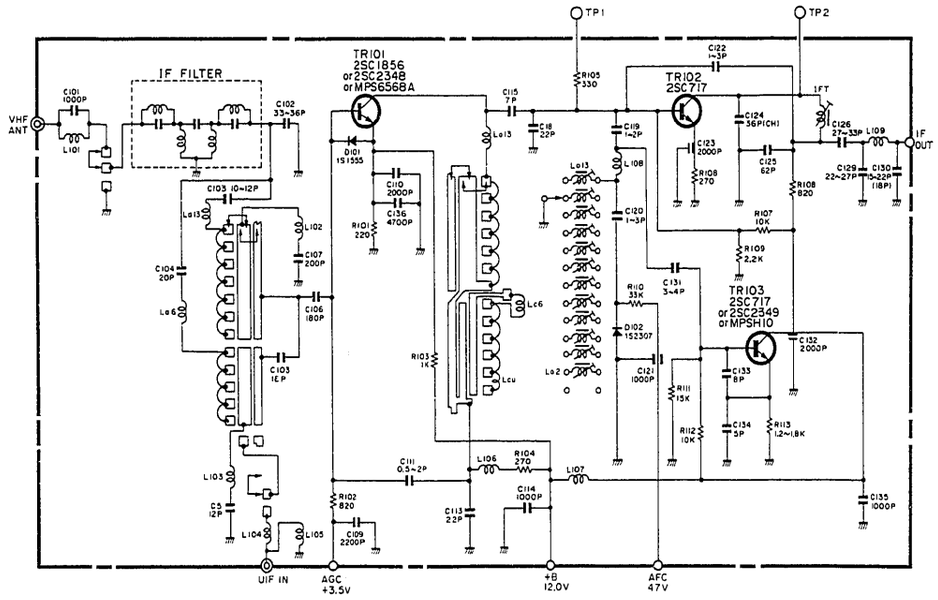
Fig. 2

TUNER CIRCUIT DIAGRAM (HU-424/HT-457A)

HU-424

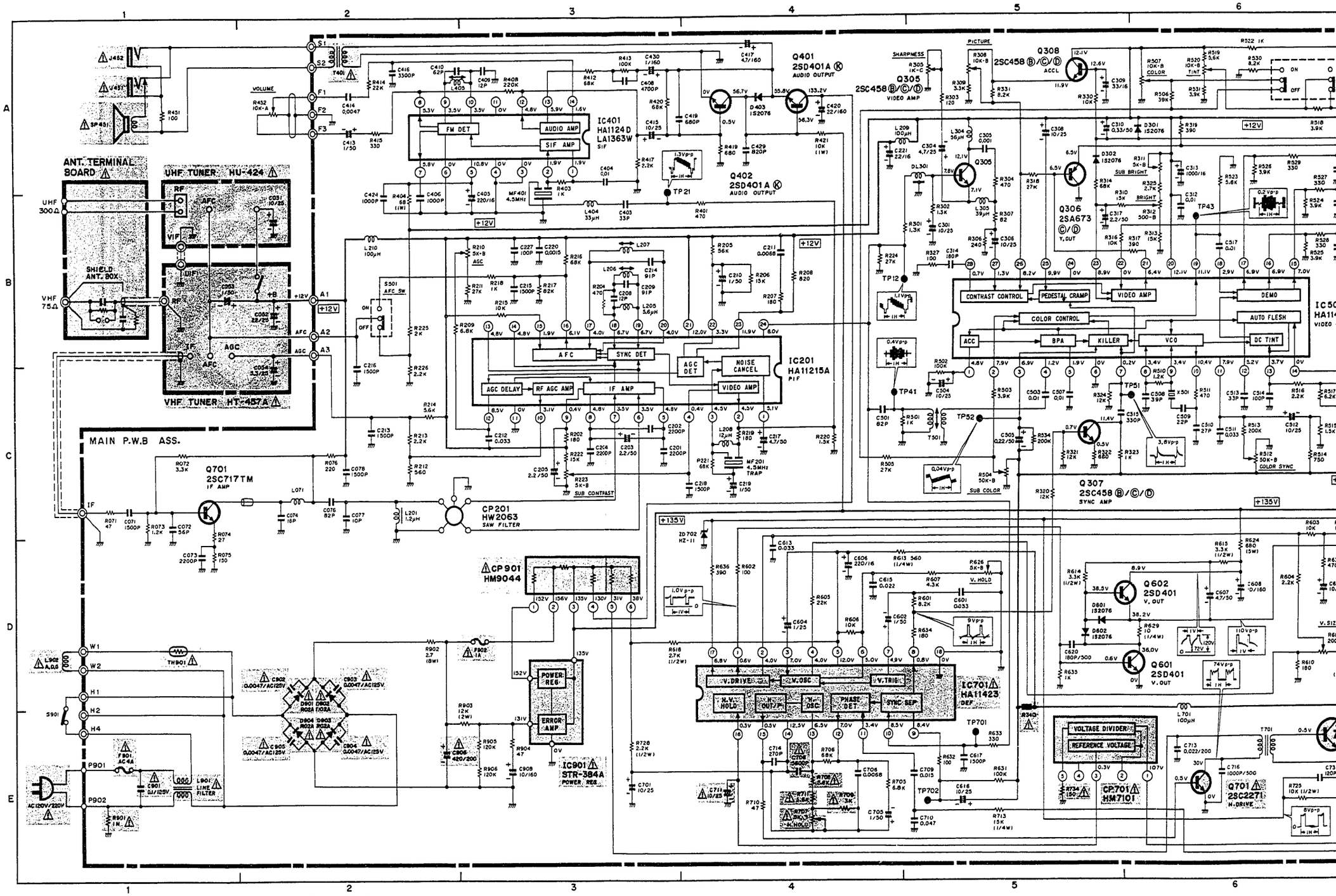


HT-457A



PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver though improper servicing.

BASIC CIRCUIT DIAGRAM (CT1900/1910/1912)

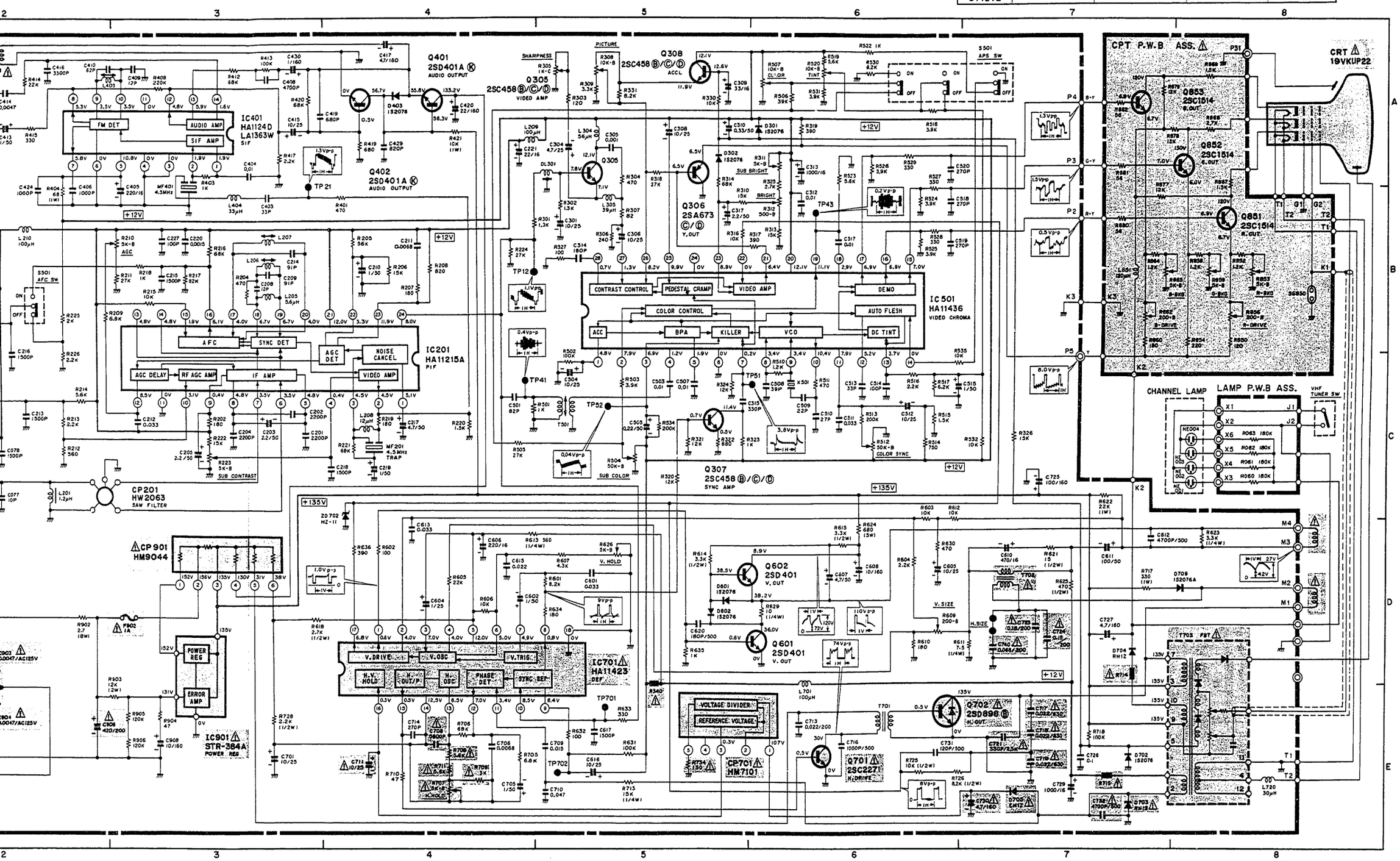


- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100kΩ/V).
  Voltage taken on a complex color bar signal including a standard color bar signal.

ve special characteristics important to
UCT SAFETY NOTICE of this Service

BASIC CIRCUIT DIAGRAM (CT1900/1910/1912)

	J451/452,R451	CHANNEL LAMP	LAMP P.W.B.	V1
CT1900	X	X	X	19VKSP22
CT1910	O	X	X	19VKUP22
CT1912	O	O	O	19VKUP22

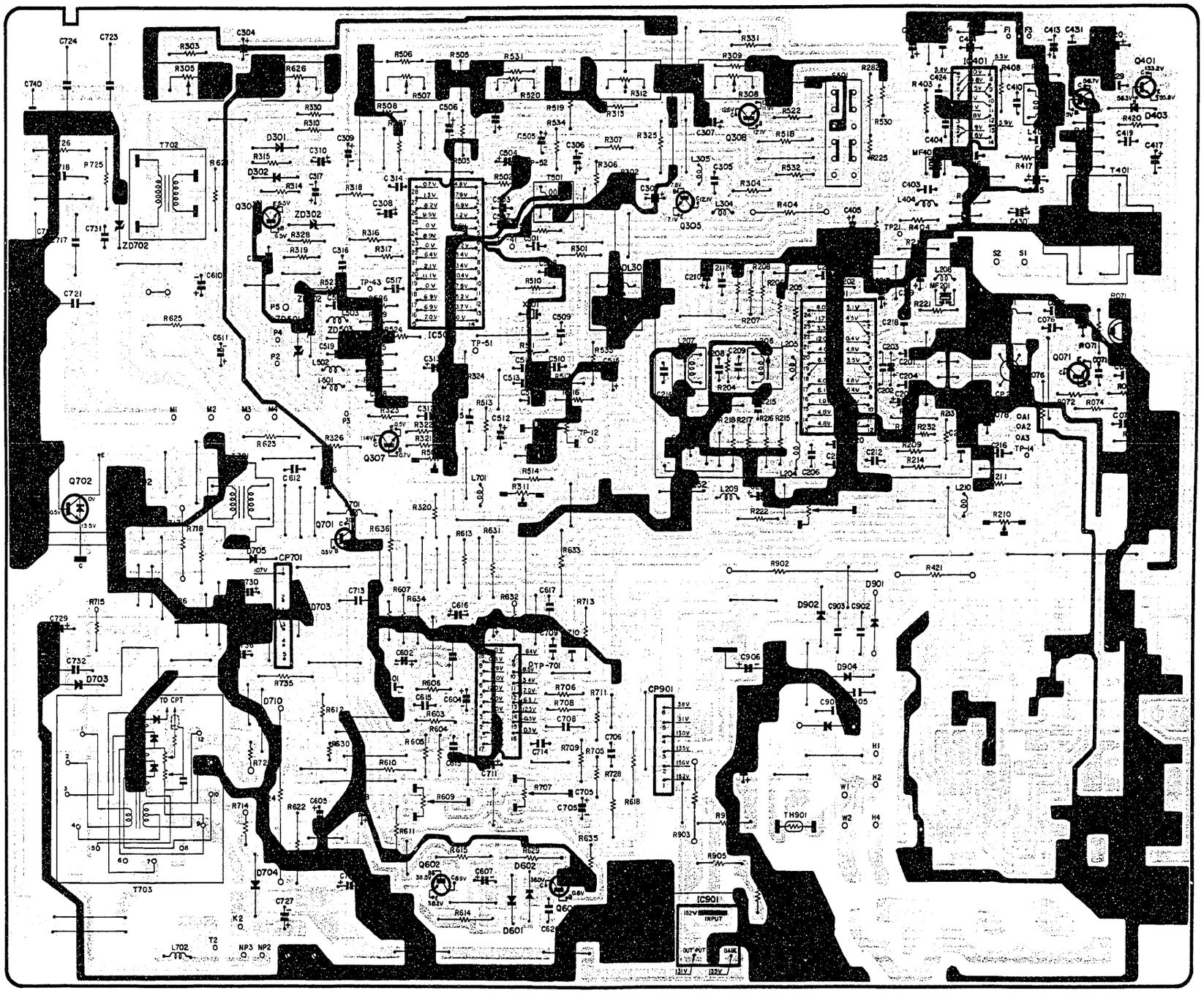


PRINTED WIRING BOARD

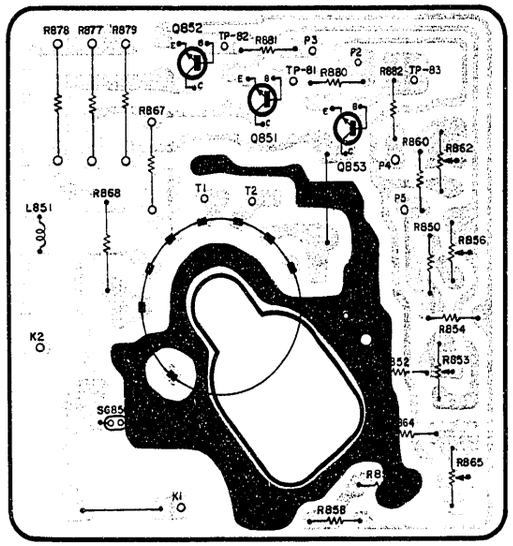
... SIGNAL PATTERN

... GROUND PATTERN

1. MAIN P.W. BOARD

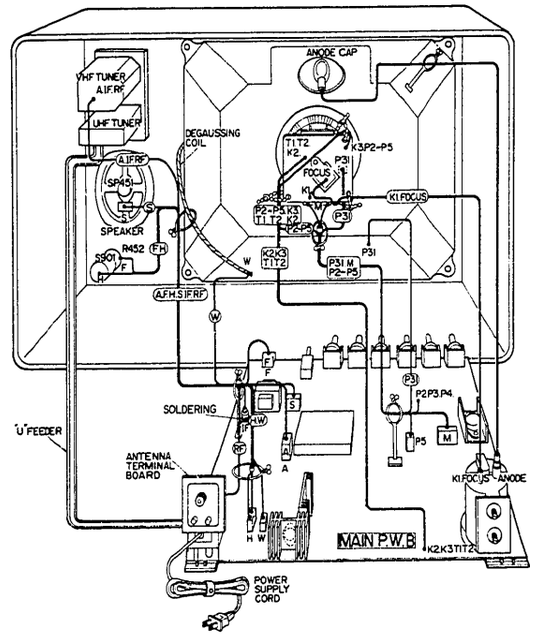


2. CPT P.W. BOARD

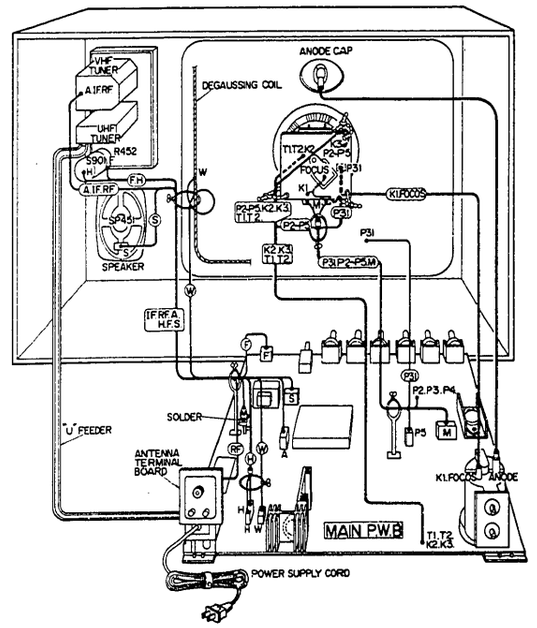


WIRING DIAGRAM

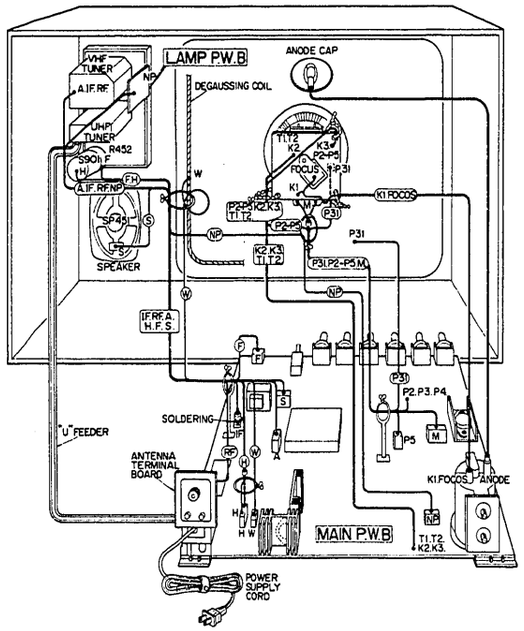
(CT1900)



(CT1910)



(CT1912)



REPLACEMENT PARTS LIST

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

ABBREVIATIONS: Capacitors . . . . . CD: Ceramic disk, PF: Polyester film, EL: Electrolytic, PP: Polypropylene, PR: Paper, TA: Tantalum
Resistors . . . . . CF: Carbon film, CC: Carbon composition, OMF: Metal oxide film, VR: Variable resistor, WW: Wire wound, FR: Fuse resistor

[All CD, PF and PP capacitors are ±5%, 50V and all resistors, ±5%, 1/4W unless otherwise noted.]

SYMBOL MO.	PART NO.	DESCRIPTION
CAPACITORS		
C051	0252621	EL, 10mfd, 25V
C052	0252622	EL, 22mfd, 25V
C053	0252811	EL, 1mfd, 50V
C054	0252613	EL, 3.3mfd, 25V
C071	0244103	CD, 1500pF, ±10%
C072	0246458	CD, 56pF
C073	0244105	CD, 2200pF
C074	0246446	CD, 18pF, ±10%
C076	0246462	CD, 82pF, ±10%
C077	0246420	CD, 10pF, ±0.25pF
C078	0244103	CD, 1500pF, ±10%
C201	0244105	CD, 2200pF
C202	0244105	CD, 2200pF
C203	0252817	EL, 2.2mfd, 50V
C204	0244105	CD, 2200pF
C205	0252817	EL, 2.2mfd, 50V
C208	0246442	CD, 12pF
C209	0246463	CD, 91pF
C210	0252811	EL, 1mfd, 50V
C211	0274761	PF, 6800pF
C212	0277019	PF, 0.033mfd, ±10%
C213	0244103	CD, 1500pF, ±10%
C214	0246463	CD, 91pF
C215	0244103	CD, 1500pF, ±10%
C216	0244103	CD, 1500pF, ±10%
C217	0252815	EL, 5mfd, 50V
C218	0244103	CD, 1500pF, ±10%
C219	0252811	EL, 1mfd, 50V
C220	0274753	PF, 1500pF
C221	0252522	EL, 20mfd, 15V
C227	0248684	CD, 100pF
C301	0252621	EL, 10mfd, 25V
C304	0252615	EL, 4.7mfd, 25V
C305	0244139	CD, 1000pF, ±10%
C306	0252621	EL, 10mfd, 25V
C307	0244139	CD, 1000pF, ±10%
C308	0252621	EL, 10mfd, 25V
C309	0252523	EL, 30mfd, 15V
C310	0252615	EL, 4.7mfd, 25V
C312	0274763	PF, 1000pF, ±10%
C313	0253054	EL, 1000mfd, 16V
C314	0244116	CD, 180pF, ±10%
C315	0244113	CD, 330pF, ±10%
C317	0252806	EL, 0.022mfd, 50V
C403	0248672	CD, 33pF
C404	0244171	CD, 0.01mfd, $^{+80}_{-20}$ %
C405	0252532	EL, 200mfd, 15V
C406	0244139	CD, 1000pF, ±10%
C408	0244509	CD, 4700pF, ±10%
C409	0246442	CD, 12pF
C410	0246719	CD, 62pF
C413	0252811	EL, 1mfd, 50V
C414	0274759	PF, 4700pF, ±10%
C415	0252621	EL, 10mfd, 25V
C416	0274757	PF, 3300pF
C417	0257537	EL, 4.7mfd, 160V
C419	0243511	CD, 680pF
C420	0258585	EL, 22mfd, 160V
C424	0244139	CD, 1000pF, ±10%
C429	0243512	CD, 820pF, ±10%, 500V
C430	0257535	EL, 1mfd, 160V
C501	0248682	CD, 82pF
C503	0244171	CD, 0.01mfd, $^{+80}_{-20}$ %
C504	0252621	EL, 10mfd, 25V
C505	0252806	EL, 0.022mfd
C507	0244171	CD, 0.01mfd, $^{+80}_{-20}$ %
C508	0246454	CD, 39pF, ±10%
C509	0246448	CD, 22pF
C510	0246450	CD, 27pF, ±0.5pF
C511	0277019	PF, 0.033mfd, ±10%
C512	0252621	EL, 10mfd, 25V
C513	0248672	CD, 33pF
C514	0248684	CD, 100pF
C515	0252811	EL, 1mfd, 50V
C517	0244171	CD, 0.01mfd, $^{+80}_{-20}$ %
C518	0244136	CD, 270pF, ±10%
C519	0244136	CD, 270pF, ±10%
C520	0244136	CD, 270pF, ±10%
C601	0277019	PF, 0.033mfd, ±10%
C602	0252811	EL, 1mfd, 50V
C604	0292706	PP, 1mfd, 25V
C605	0252621	EL, 10mfd, 25V
C606	0252532	EL, 200mfd, 15V
C607	0252815	EL, 5mfd, 50V
C608	0258584	EL, 10mfd, 160V
C610	0252565	EL, 470mfd, 16V
C611	0252861	EL, 100mfd, 50V
C612	0244565	CD, 4700pF, $^{+100}_{-0}$ %, 500V
C613	0277019	PF, 0.033mfd, ±10%
C615	0277017	PF, 0.022mfd, ±10%
C616	0252813	EL, 33mfd, 50V
C617	0244103	CD, 1500pF, ±10%
C620	0243504	CD, 180pF, ±10%
C701	0252621	EL, 10mfd, 25V
C705	0252811	EL, 1mfd, 50V
C706	0244111	CD, 6800pF, ±10%
⚠C708	0299978	PP, 5600pF
C709	0277015	PF, 0.015mfd, ±10%
C710	0277021	PF, 0.047mfd, ±10%
⚠C711	0252621	EL, 10mfd, 25V
C713	0299918	PP, 0.022mfd, ±10%, 200V
C714	0244136	CD, 270pF, ±10%
C716	0244501	CD, 0.001mfd, ±10%, 500V
⚠C717	0299994	PP, 0.023mfd, 630V
⚠C718	0299994	PP, 0.023mfd, 630V
⚠C719	0299994	PP, 0.023mfd, 630V
⚠C721	0243837	CD, 330pF, ±10%, 2.5KV
⚠C723	0299929	PP, 0.18mfd, ±10%, 200V
⚠C724	0299928	PP, 0.15mfd, ±10%, 200V
C725	0259857	EL, 100mfd, 160V
C726	0277025	PF, 0.1mfd, ±10%, 200V
C727	0258584	EL, 10mfd, 160V
C729	0252536	EL, 1000mfd, 16V
⚠C730	0257537	EL, 4.7mfd, 160V
C731	0247856	CD, 120pF, 500V
⚠C732	0244565	CD, 4700pF, $^{+100}_{-0}$ %, 500V
⚠C740	0299924	PP, 0.068mfd, ±10%, 200V
C856	0247825	CD, 50pF, 500V
⚠C901	0279744	PF, 0.1mfd, 125V
⚠C902	0249150	CD, 4700pF, AC125V
⚠C903	0249150	CD, 4700pF, AC125V
⚠C904	0249150	CD, 4700pF, AC125V
⚠C905	0249150	CD, 4700pF, AC125V
⚠C906	0259855	EL, 420mfd, 200V
C908	0258584	EL, 10mfd, 160V
RESISTORS		
R060	0113805	CF, 180K ohm, 1/2W
R061	0113805	CF, 180K ohm, 1/2W
R062	0113805	CF, 180K ohm, 1/2W
R063	0113805	CF, 180K ohm, 1/2W
R071	0100033	CF, 47 ohm, 1/8W
R072	0100077	CF, 3.3K ohm, 1/8W

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PARTS NO.	DESCRIPTION	SYMBOL NO.	PARTS NO.	DSCRIPTION	SYMBOL NO.	PARTS NO.	DESCRIPTION
R073	0100067	CF, 1.2K ohm, 1/8W	R408	0100121	CF, 220K ohm, 1/8W	R625	0113742	CF, 470 ohm, 1/2W
R074	0100027	CF, 27 ohm, 1/8W	R412	0100109	CF, 68K ohm, 1/8W	R626	0159568	VR, 5K ohm-B
R075	0100045	CF, 150 ohm, 1/8W	R413	0100113	CF, 100K ohm, 1/8W	R629	0114041	CF, 10 ohm
R076	0100049	CF, 220 ohm, 1/8W	R414	0100097	CF, 22K ohm, 1/8W	R630	0100057	CF, 470 ohm, 1/8W
R202	0114137	CF, 180 ohm,	R415	0100053	CF, 330 ohm, 1/8W	R631	0100111	CF, 82K ohm, 1/8W
R204	0100057	CF, 470 ohm, 1/8W	R417	0100073	CF, 2.2K ohm, 1/8W	R632	0100041	CF, 100 ohm, 1/8W
R205	0100107	CF, 56K ohm, 1/8W	R419	0100061	CF, 680 ohm, 1/8W	R633	0100053	CF, 330 ohm, 1/8W
R206	0100093	CF, 15K ohm, 1/8W	R420	0100109	CF, 68K ohm, 1/8W	R634	0100047	CF, 180 ohm, 1/8W
R207	0100047	CF, 180 ohm, 1/8W	R421	0110169	OMF, 10K ohm, 1W	R635	0100065	CF, 1K ohm, 1/8W
R208	0100063	CF, 820 ohm, 1/8W	R451	0113725	CF, 100 ohm, 1/2W	R636	0100055	CF, 390 ohm, 1/8W
R209	0100085	CF, 6.8K ohm, 1/8W	R501	0100065	CF, 1K ohm, 1/8W	R705	0100085	CF, 6.8K ohm, 1/8W
R210	0151254	VR, 5K ohm-B	R502	0100113	CF, 100K ohm, 1/8W	R706	0100109	CF, 68K ohm, 1/8W
R211	0100099	CF, 27K ohm, 1/8W	R503	0100079	CF, 3.9K ohm, 1/8W	⚠R707	0151187	VR, 5K 0hm-B
R212	0100059	CF, 560 ohm, 1/8W	R504	0151257	VR, 50K ohm-B	⚠R708	0100083	CF, 5.6K ohm, 1/8W
R213	0100073	CF, 2.2K ohm, 1/8W	R505	0100099	CF, 27K ohm, 1/8W	⚠R709	0100080	CF, 4.3K ohm, 1/8W
R214	0100083	CF, 5.6K ohm, 1/8W	R506	0100103	CF, 39K ohm, 1/8W	R710	0100033	CF, 47 ohm, 1/8W
R215	0100089	CF, 10K ohm, 1/8W	R507	0159557	VR, 10K ohm-B	⚠R711	0100083	CF, 5.6K ohm, 1/8W
R216	0100109	CF, 68K ohm, 1/8W	R510	0100067	CF, 1.2K ohm, 1/8W	R713	0114205	CF, 15K ohm
R217	0100111	CF, 82K ohm, 1/8W	R511	0100057	CF, 470 ohm, 1/8W	⚠R714	0119505	FR, 2.2 ohm
R218	0100065	CF, 1K ohm, 1/8W	R512	0151297	VR, 50K ohm-B	⚠R715	0119512	OMF, 1 ohm
R219	0100047	CF, 180 ohm, 1/8W	R513	0100120	CF, 200K ohm, 1/8W	R717	0110133	OMF, 330 ohm, 1W
R220	0100069	CF, 1.5K ohm, 1/8W	R514	0100062	CF, 750 ohm, 1/8W	R718	0114281	CF, 100K ohm
R221	0100109	CF, 68K ohm, 1/8W	R515	0100069	CF, 1.5K ohm, 1/8W	R725	0113774	CF, 10K ohm, 1/2W
R222	0100093	CF, 15K ohm, 1/8W	R516	0100073	CF, 2.2K ohm, 1/8W	R726	0113772	CF, 8.2K ohm, 1/2W
R223	0151187	VR, 5K ohm-B	R517	0100084	CF, 6.2K ohm, 1/8W	R728	0113758	CF, 2.2K ohm, 1/2W
R224	0100075	CF, 2.7K ohm, 1/8W	R518	0100079	CF, 3.9K ohm, 1/8W	⚠R734	0100044	CF, 130 ohm, 1/8W
R225	0100072	CF, 2K ohm, 1/8W	R519	0100083	CF, 5.6K ohm, 1/8W	R750	0114218	CF, 51K ohm
R226	0100073	CF, 2.2K ohm, 1/8W	R520	0159557	VR, 10K ohm-B	R850	0100045	CF, 150 ohm, 1/8W
R301	0100068	CF, 1.3K ohm, 1/8W	R522	0100065	CF, 1K ohm, 1/8W	R852	0100067	CF, 1.2K ohm, 1/8W
R302	0100068	CF, 1.3K ohm, 1/8W	R523	0100083	CF, 5.6K ohm, 1/8W	R853	0151338	VR, 5K ohm-B
R303	0100043	CF, 120 ohm, 1/8W	R524	0100079	CF, 3.9K ohm, 1/8W	R854	0100050	CF, 240 ohm, 1/8W
R304	0100057	CF, 470 ohm, 1/8W	R525	0100079	CF, 3.9K ohm, 1/8W	R856	0151334	VR, 200 ohm-B
R305	0159751	VR, 1K ohm-C	R526	0100079	CF, 3.9K ohm, 1/8W	R858	0100067	CF, 1.2K ohm, 1/8W
R306	0137560	CF, 240 ohm	R527	0100053	CF, 330 ohm, 1/8W	R859	0151338	VR, 5K ohm-B
R307	0100039	CF, 82 ohm, 1/8W	R528	0100053	CF, 330 ohm, 1/8W	R860	0100047	CF, 180 ohm, 1/8W
R308	0159704	VR, 10K ohm-B	R529	0100053	CF, 330 ohm, 1/8W	R862	0151334	VR, 200 ohm-B
R309	0100077	CF, 3.3K ohm, 1/8W	R530	0100087	CF, 8.2K ohm, 1/8W	R864	0100067	CF, 1.2K ohm, 1/8W
R310	0100093	CF, 15K ohm, 1/8W	R531	0100079	CF, 3.9K ohm, 1/8W	R865	0151338	VR, 5K ohm-B
R311	0151338	VR, 5K ohm-B	R532	0100089	CF, 10K ohm, 1/8W	R867	0113754	CF, 1.5K ohm, 1/2W
R312	0159553	VR, 500 ohm-B	R534	0100121	CF, 220K ohm, 1/8W	R868	0113760	CF, 2.7K ohm, 1/2W
R313	0100093	CF, 15K ohm, 1/8W	R535	0100089	CF, 10K ohm, 1/8W	R869	0113754	CF, 1.5K ohm, 1/2W
R314	0100109	CF, 68K ohm, 1/8W	R601	0100087	CF, 8.2K ohm, 1/8W	R877	0110271	OMF, 12K ohm, 1W
R316	0100089	CF, 10K ohm, 1/8W	R602	0100041	CF, 100 ohm, 1/8W	R878	0110271	OMF, 12K ohm, 1W
R317	0100055	CF, 390 ohm, 1/8W	R603	0100089	CF, 10K ohm, 1/8W	R879	0110271	OMF, 12K ohm, 1W
R318	0100099	CF, 27K ohm, 1/8W	R604	0100073	CF, 2.2K ohm, 1/8W	R880	0100035	CF, 56 ohm, 1/8W
R319	0100055	CF, 390 ohm, 1/8W	R605	0100097	CF, 22K ohm, 1/8W	R881	0100035	CF, 56 ohm, 1/8W
R320	0100091	CF, 12K ohm, 1/8W	R606	0100089	CF, 10K ohm, 1/8W	R882	0100035	CF, 56 ohm, 1/8W
R321	0100091	CF, 12K ohm, 1/8W	R607	0100080	CF, 4.3K ohm, 1/8W	⚠R901	0139015	CC, 1M ohm, ±10%, 1/2W
R322	0100061	CF, 680 ohm, 1/8W	R609	0151279	VR, 200 ohm-B			
R323	0100065	CF, 1K ohm, 1/8W	R610	0100047	CF, 180 ohm, 1/8W	⚠R902	0141066	WW, 2.7 ohm, 8W
R324	0100091	CF, 12K ohm, 1/8W	R611	0114014	CF, 7 5 ohm	R903	0110271	OMF, 12K ohm, 1W
R325	0100075	CF, 2.7K ohm, 1/8W	R612	0100089	CF, 10K ohm, 1/8W	R904	0114057	CF, 47 ohm
R326	0100093	CF, 15K ohm, 1/8W	R613	0114149	CF, 560 ohm	R905	0100115	CF, 120K ohm, 1/8W
R327	0100041	CF, 100 ohm, 1/8W	R614	0113762	CF, 3.3K ohm, 1/2W	R906	0100115	CF, 120K ohm, 1/8W
R330	0100089	CF, 10K ohm, 1/8W	R615	0113762	CF, 3.3K ohm, 1/2W			
R331	0100087	CF, 8.2K ohm, 1/8W	R618	0113760	CF, 2.7K ohm, 1/2W			
R340	0119512	OMF, 1 ohm	R621	0113705	CF, 15 ohm, 1/2W			
R401	0100057	CF, 470 ohm, 1/8W	R622	0110177	OMF, 22K ohm, 1W			
R403	0100065	CF, 1K ohm, 1/8W	R623	0114173	CF, 3.3K ohm			
R404	0110117	OMF, 68 ohm, 1W	⚠R624	0111772	OMF, 680 ohm, 5W			

SYMBOL NO.	PARTS NO.	DESCRIPTION
SEMICONDUCTORS		
IC201	2360782	HA11215A
IC401	2360391	HA1124D
IC501	2365061	HA11436
⚠:C701	2364181	HA11423
IC901	2364134	STR384A
Q071	2320143	2SC717TM
Q305	2320595	2SC458 (D)
Q306	2320637	2SA673 (C)/(D)
Q307	2320595	2SC458 (D)
Q308	2320595	2SC458 (D)
Q401	2321591	2SD401 AK
Q402	2321591	2SD401 AK
Q601	2321306	2SD401/401A
Q602	2321306	2SD401/401A
⚠Q701	2321992	2SC2271 (M)/(N)
⚠Q702	2323021	2SD898 (B)
Q851	2321221	2SC1514
Q852	2321221	2SC1514
Q853	2321221	2SC1514
D301	2330351	1S2076
D302	2330351	1S2076
D403	2330351	1S2076
D601	2330351	1S2076
D602	2330351	1S2076
D702	2330352	1S2076A
⚠D703	2332251	RH-1S
D704	2332141	RH-1Z
⚠D705	2332851	EH-1Z
D709	2330352	1S2076A
⚠D901	2331991	R02A
⚠D902	2331991	R02A
⚠D903	2331991	R02A
⚠D904	2331991	R02A
ZD702	2331161	HZ-11 (A)/(B)/(C)
COILS/TRANSFORMERS		
L071	2141776	M7-D Coil
L201	2122301	LAP Coil
L205	2120079	Peaking coil
L206	2142015	G type mold IFT
L207	2142015	G type mold IFT
L208	2121693	Peaking coil
L209	2120482	Filter coil
L210	2120482	Filter coil
L304	2121702	Peaking coil
L305	2121699	Peaking coil
L404	2121698	Peaking ooil
L405	2141012	S-IF trans.
L701	2120482	Filter coil
L702	2122213	Filter coil
L851	2121708	Peaking coil
⚠L901	2121672	Filter coil
L902	2162416	Degaussing coil

SYMBOL NO.	PARTS NO.	DESCRIPTION
T401	2250359	Sound output trans.
T501	2141533	Band pass trans.
T701	2260021	H. Drive trans.
⚠T702	2270521	Pin cushion trans.
⚠T703	2432811	Flyback trans.
MISCELLANEOUS		
CP201	2300073	Saw filter HW2063
⚠CP701	2370152	Module HM7101HD
⚠CP901	2370424	Module HM9044
MF201	2142241	Ceramic filter
MF401	2140631	Compound component
⚠F901	2720587	Fuse 4A
⚠F902	2720811	Fuse 1A
DL301	2162294	Delay line coil
⚠J451	2670292	Jack earphone
⚠SG850	2340038	Spark gap
⚠SP451	2411291	Speaker 80 x 120 mm
S501	2630771	Push switch
⚠S901	2631171	Pull push switch
⚠V1	2352221	CPT 19VKSP22 (HCPA) (CT1900)
⚠V1	2352861	CPT 19VKUP22 (HTT) (CT1910)
⚠V1	2352861	CPT 19VKUP22 (HTT) (CT1912)
	0043209	Telescopic antenna
	2422384	Tuner HU-424
	2424331	Tuner HT-457A
⚠	2441523	Deflection yoke (CT1900)
⚠	2441521	Deflection yoke (CT1910)
⚠	2441521	Deflection yoke (CT1912)
	2658893	CPT socket
	2662371	Plug
	2687951	VHF antenna adaptor
	2720221	Fuse holder
	2730063	Earphone
⚠	2742553	AC cord
	2750243	Rod antenna assy
	2750341	Loop antenna assy
	2760474	Channel lamp
	2770791	Ferrite core
	2771891	Ferrite core 003
	2771981	C-F magnet (CT1900)
	2771831	C-F magnet (CT1910)
	2771831	C-F magnet (CT1912)
	2782611	Center pin
	3224176	Frame assy (CT1900)
	3134511	Cabinet assy (CT1912)
	3221082	Knob-VHF channel indicator (CT1900)
	3221081	Knob-VHF channel indicator (CT1910)
	3221081	Knob-VHF channel indicator (CT1912)
	3262511	Knob-VHF channel (CT1900)
	3259411	Knob-VHF channel (CT1910)
	3259411	Knob-VHF channel (CT1912)
	3259372	Knob-VHF preset
	3262512	Knob-UHF channel (CT1900)
	3259413	Knob-UHF channel (CT1910)
	3259413	Knob-UHF channel (CT1912)
	3262521	Knob-UHF channel indicator (CT1900)
	3262523	Knob-UHF channel indicator (CT1910)
	3262523	Knob-UHF channel indicator (CT1912)
	3259831	Knob-UHF fine tuning
	3262341	Knob-APS
	3262411	Knob-VR
	3263562	Knob-Main (CT1900)
	3263561	Knob-Main (CT1910)
	3263561	Knob-Main (CT1911)
	3330941	Earth spring
	3453083	Back cover (HCPA) (CT1900)
	3452012	Back cover
	3452012	Back cover
	3719342	Canoe rivet
	3467231	Antenna base
	4614791	Wedge
	3720501	Lead clamp
	3741752	Indicator board holder
TH901	2340263	Thermistor

MEMO

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